

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s) :	Norbert Moszner, Frank Zeuner, Volker Rheinberger, Jörg Angermann, and Thomas Völkel	)	Examiner: To Be Assigned
Serial No. :	To Be Assigned	)	Art Unit: To Be Assigned
Cnfrm. No. :	To Be Assigned	)	
Filed :	Herewith	)	
For :	DENTAL MATERIALS BASED ON POLYFUNCTIONAL AMIDES	)	

## **PRELIMINARY AMENDMENT**

U. S. Patent and Trademark Office  
Box 2327  
Arlington, Virginia 22202  
Box: Patent Application

Dear Sir:

Please amend the above-identified patent application as follows:

#### In the Specification:

In the first line of the specification following the title please insert the following paragraph:

This application claims the benefit of U.S. Provisional Patent Application

No. 60/289,097, filed May 7, 2001, which is herein incorporated by reference in its entirety.

In the Claims:

Please delete claim 15, without prejudice or disclaimer and replace claims 3-5, 7 and 9-14 with amended claims 3-5, 7 and 9-14 as follows:

3. (Amended) Dental material according to claim 1, characterized in that B carries, in addition to the group X, one or more substituents which are chosen from Cl, Br, OH and/or COOH.

4. (Amended) Dental material according to claim 1, characterized in that R<sup>1</sup> and/or R<sup>2</sup> are substituted once or several times, the substituent or substituents being chosen from Cl, Br, OH and/or COOH.

5. (Amended) Dental material according to claim 1, characterized in that it contains a polymerization initiator and optionally a polymerizable binder.

7. (Amended) Dental material according to claim 5, characterized in that it contains at least one ethylenically unsaturated polymerizable monomer.

9. (Amended) Dental material according to claim 5, characterized in that the quantity of the amide BX<sub>n</sub> relative to the sum of the masses of the amide BX<sub>n</sub> and other polymerizable monomers is more than 3 wt.-%, preferably more than 10 wt.-%.

10. (Amended) Dental material according to claim 5, characterized in that it contains an initiator for the photopolymerization.

11. (Amended) Dental material according to claim 1, characterized in that it contains filler.

12. (Amended) Dental material according to claim 1, characterized in that it contains at least 1 wt.-% preferably at least 5 wt.-% of the amid BX<sub>n</sub> relative to the overall mass of the dental material.

13. (Amended) Dental material according to claim 1, characterized in that it contains

- (a) 1 to 90 wt.-% of the amide BX<sub>n</sub>,
- (b) 0.1 to 5.0 wt.-% polymerization initiator,
- (c) 0 to 70 wt.-% polymerizable monomer (non-acidic),
- (d) 0 to 70 wt.-% acidic polymerizable monomer,
- (e) 0 to 70 wt.-% filler,

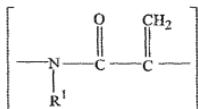
(f) 0 to 70 wt.-% solvent

in each case relative to the overall mass of the dental material.

14. (Amended) An amide of the general formula BX<sub>n</sub> in which

B stands for a hydrocarbon radical with 1 to 50 carbon atoms which can contain one or more of the groups O, S, NH, CO-NH, O-CO-NH and/or NH-CO-NH, and which is substituted n times by the group X,

X stands for the group



which is bound to the radical B via the nitrogen atom or via C-2, the bond site not connected to B carrying a radical R<sup>2</sup>,

R<sup>1</sup> is hydrogen, an alkyl group with 1 to 20 carbon atoms or a phenyl radical, two or more radicals X being able to share a radical R<sup>1</sup> and R<sup>1</sup> also being able to be a constituent of the radical B,

R<sup>2</sup> is hydrogen, an alkyl group with 1 to 20 carbon atoms or a phenyl radical, and n is a number from 2 to 5, comprising a dental adhesive, coating material, filling material or dental cement.

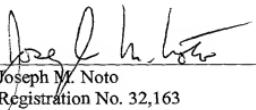
**REMARKS**

Entry of the foregoing in advance of the initial Office Action is respectfully requested.

By the present preliminary amendment, claim 15 has been deleted and claims 3-5, 7 and 9-14 have been amended to conform the foreign language originating text to U.S. practice. Pursuant to 37 CFR § 1.121, attached as Appendix A is a Version of the Claims With Markings to Show Changes Made.

Early allowance of the pending claims is hereby earnestly solicited.

Respectfully submitted,

  
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## Appendix A

### Version of the Claims With Markings to Show Changes Made

In reference to the amendments made herein to claims 3-5, 7 and 9-14, additions appear as underlined text, while deletions appear as bracketed text, as indicated below:

#### In The Claims:

3. (Amended) Dental material according to claim 1 [or 2], characterized in that B carries, in addition to the group X, one or more substituents which are chosen from Cl, Br, OH and/or COOH.

4. (Amended) Dental material according to [one of] claim[s] 1 [to 3], characterized in that R<sup>1</sup> and/or R<sup>2</sup> are substituted once or several times, the substituent or substituents being chosen from Cl, Br, OH and/or COOH.

5. (Amended) Dental material according to [one of] claim[s] 1 [to 4], characterized in that it contains a polymerization initiator and optionally a polymerizable binder.

7. (Amended) Dental material according to claim 5 [or 6], characterized in that it contains at least one ethylenically unsaturated polymerizable monomer.

9. (Amended) Dental material according to [one of] claim[s] 5 [to 8], characterized in that the quantity of the amide BX<sub>n</sub> relative to the sum of the masses of the amide BX<sub>n</sub> and other polymerizable monomers is more than 3 wt.-%, preferably more than 10 wt.-%.

10. (Amended) Dental material according to [one of] claim[s] 5 [to 9], characterized in that it contains an initiator for the photopolymerization.

11. (Amended) Dental material according to [one of] claim[s] 1 [to 10], characterized in that it contains filler.

12. (Amended) Dental material according to [one of] claim[s] 1 [to 11], characterized in that it contains at least 1 wt.-% preferably at least 5 wt.-% of the amid BX<sub>n</sub> relative to the overall mass of the dental material.

13. (Amended) Dental material according to [one of] claim[s] 1 [to 12], characterized in that it contains

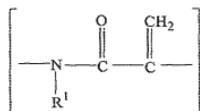
- (a) 1 to 90 wt.-% of the amide BX<sub>n</sub>,
- (b) 0.1 to 5.0 wt.-% polymerization initiator,
- (c) 0 to 70 wt.-% polymerizable monomer (non-acidic),
- (d) 0 to 70 wt.-% acidic polymerizable monomer,
- (e) 0 to 70 wt.-% filler,
- (f) 0 to 70 wt.-% solvent

in each case relative to the overall mass of the dental material.

14. (Amended) [Use of a]An amide of the general formula BX<sub>n</sub> in which

B stands for a hydrocarbon radical with 1 to 50 carbon atoms which can contain one or more of the groups O, S, NH, CO-NH, O-CO-NH and/or NH-CO-NH, and which is substituted n times by the group X,

X stands for the group



which is bound to the radical B via the nitrogen atom or via C-2, the bond site not connected to B carrying a radical R<sup>2</sup>,

R<sup>1</sup> is hydrogen, an alkyl group with 1 to 20 carbon atoms or a phenyl radical, two or more radicals X being able to share a radical R<sup>1</sup> and R<sup>1</sup> also being able to be a constituent of the radical B,

R<sup>2</sup> is hydrogen, an alkyl group with 1 to 20 carbon atoms or a phenyl radical, and  
n is a number from 2 to 5, comprising a dental adhesive, coating material, filling  
material or dental cement.

[as dental material or for the preparation of a dental material.]